

WHAT IS CLAIMED IS:

1. An apparatus for controlling a driving force of an electric vehicle comprising:

a traction motor;

5 a transmitting section which is disposed between said traction motor and a drive wheel, and which transmits a driving force of said traction motor to said drive wheel;

a driving force calculating section which calculates the driving force of said traction motor on the basis of
10 an operating state of a vehicle; and

a motor controlling section which controls said traction motor on the basis of the driving force calculated by said driving force calculating section, and

a revolution number detecting section which detects a
15 number of revolutions of said traction motor, wherein

in a state where a change of the number of revolutions detected by said revolution number detecting section is equal to or smaller than a predetermined value and the driving force calculated by said driving force
20 calculating section is equal to or larger than a predetermined value, when a driving duration time period of said traction motor reaches a predetermined time period, said motor controlling section reduces a transmission amount of the driving force of said traction motor which
25 is transmitted through said transmitting section.

2. An apparatus for controlling a driving force of an electric vehicle comprising:

a traction motor;

5 a transmitting section which is disposed between said traction motor and a drive wheel, and which transmits a driving force of said traction motor to said drive wheel;

a driving force calculating section which calculates the driving force of said traction motor on the basis of
10 an operating state of a vehicle; and

a motor controlling section which controls said traction motor on the basis of the driving force calculated by said driving force calculating section, and

a revolution number detecting section which detects a
15 number of revolutions of said traction motor, wherein

in a state where a change of the number of revolutions detected by said revolution number detecting section is equal to or smaller than a predetermined value and the driving force calculated by said driving force
20 calculating section is equal to or larger than a predetermined value, when a driving duration time period of said traction motor reaches a predetermined time period, said motor controlling section interrupts transmission of the driving force of said traction motor by said
25 transmitting section, and, after elapse of a predetermined

time period, restarts the transmission of the driving force.

3. The apparatus for controlling a driving force of an electric vehicle according to claim 1, further comprising:

an inclination angle calculating section which calculates an inclination angle of a road surface, wherein said driving force calculating section calculates the driving force of said traction motor on the basis of the inclination angle calculated by said inclination angle calculating section, and the operating state of the vehicle.

4. The apparatus for controlling a driving force of an electric vehicle according to claim 1, wherein

said traction motor is a brushless DC motor comprising: a rotor having permanent magnets; and plural-phase stator windings which generate a rotating magnetic field for rotating said rotor, and

said motor controlling section calculates a continuous energization time period of one of said plural-phase stator windings on the basis of the driving force calculated by said driving force calculating section, and controls a state of transmission of the driving force of said traction motor through said transmitting section, on

the basis of the continuous energization time period.

5. An apparatus for controlling a driving force of an electric vehicle comprising:

5 a traction motor;

a driving force calculating section which calculates a driving force of said traction motor on the basis of an operating state of a vehicle; and

10 a motor controlling section which controls said traction motor on the basis of the driving force calculated by said driving force calculating section, and

a revolution number detecting section which detects a number of revolutions of said traction motor, and

15 a fluid coupling which is disposed between said traction motor and a drive wheel, and which transmits the driving force of said traction motor to said drive wheel, wherein

in a state where a change of the number of revolutions detected by said revolution number detecting
20 section is equal to or smaller than a predetermined value and the driving force calculated by said driving force calculating section is equal to or larger than a predetermined value, when a driving duration time period of said traction motor elapses a predetermined time period,
25 said motor controlling section reduces an energization

amount of said traction motor for a predetermined time period.

6. The apparatus for controlling a driving force of an electric vehicle according to claim 5, further comprising:
an inclination angle calculating section which calculates an inclination angle of a road surface, wherein said driving force calculating section calculates the driving force of said traction motor on the basis of the inclination angle calculated by said inclination angle calculating section, and the operating state of the vehicle.

7. The apparatus for controlling a driving force of an electric vehicle according to claim 6, wherein said traction motor is a brushless DC motor comprising: a rotor having permanent magnets; and plural-phase stator windings which generate a rotating magnetic field for rotating said rotor, and

said motor controlling section calculates a continuous energization time period of one of said plural-phase stator windings on the basis of the driving force calculated by said driving force calculating section, and controls the energization amount of said traction motor on the basis of the continuous energization time period.

8. The apparatus for controlling a driving force of an electric vehicle according to claim 2, further comprising:

an inclination angle calculating section which
5 calculates an inclination angle of a road surface, wherein
said driving force calculating section calculates the
driving force of said traction motor on the basis of the
inclination angle calculated by said inclination angle
calculating section, and the operating state of the
10 vehicle.

9. The apparatus for controlling a driving force of an electric vehicle according to claim 2, wherein

said traction motor is a brushless DC motor
15 comprising: a rotor having permanent magnets; and plural-
phase stator windings which generate a rotating magnetic
field for rotating said rotor, and

said motor controlling section calculates a
continuous energization time period of one of said plural-
20 phase stator windings on the basis of the driving force
calculated by said driving force calculating section, and
controls a state of transmission of the driving force of
said traction motor through said transmitting section, on
the basis of the continuous energization time period.

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